



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/536,928

05/31/2005

Kazuhiro Yamada

MATS:060

2470

37013 7590 04/01/2008
ROSSI, KIMMS & McDOWELL LLP.
P.O. BOX 826
ASHBURN, VA 20146-0826

EXAMINER

MA, CALVIN

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

04/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/536,928	Applicant(s) YAMADA, KAZUHIRO	
	Examiner CALVIN C. MA	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 01/07/2008, 06/22/2007 and 05/31/2005 was received. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasahara et al. (US Patent: 6,965,358) in view of Okuzawa et al. (US Patent: 7,102,599)

As to claim 1 and 9, Kasahara teaches a device as well as a method of displaying an image in which a single field is made of a plurality of subfields weighted with brightness, and a plurality of pieces of emission pattern information, which show an emitted state with "1" and a non-emitted state with "0," of a pixel for each subfield, are

used for displaying one gradation level, wherein a value of gradation levels shown by each of the plurality of pieces of emission pattern information, is equal to one of the gradation levels (i.e. the emission pattern information is included in the table 1-10 where the subfield related to the gradation level is outlined) (see Fig. 4, Table 1-10); and

an emission rate (i.e. the rate by which to total emission of the PDP display through each of the subfield), which is the plurality of pieces of emission pattern (i.e. the pattern of emission with respect to the diffusion, accumulation and dithering processes) information, of any subfield with brightness weight smaller than maximum brightness weight (i.e. all '1') of a subfield in which an average emission rate thereof is not zero (i.e. the display working to emit light), is equal to a given threshold or greater (i.e. the threshold is the value scale assigned to each of the grayscale level according the weights assigned, and since in this case the maximum and minimum values are removed to prevent errors the subfield would have a equivalent value as the threshold, the brightness weight of any subfield will be smaller than maximum brightness weight) (see Fig 2A, Col. 11, Line 40-Col. 12, Line 35).

However Kasahara is silent about the idea of having an average value for the gradation level and emission rate. Okuzawa teaches an averaging circuit that average the picture level. (i.e. the gradation level and emission rate are a way to display an image which is equivalent to the concept of picture level calculated by the APL calculation circuit 13b) (see Okuzawa, Fig. 4, Col. 7, Lines 43-48)

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have utilized the average value calculation circuit of Okuzawa in the overall display control system of Kasahara in order to reduce the degradation of image quality due to dynamic false contour by allow a more flexible way to detect and correct degradations. (see Okuzawa, Col. 2, Lines 46-67)

As to claim 2 and 10, Kasahara teaches a device as well as a method of displaying an image as claimed in claims 1 and 9, wherein the given threshold is 0.5 (i.e. since Kasahara uses dithering and offers a balance subfield assignment table the given threshold is 0.5 which is the balanced proportion of '1' and '0' in the subfield) (see Fig. 1, Col. 5, Lines 5-43).

As to claims 3 and 11 Kasahara teaches a device and method of displaying an image as claimed in claims 1 and 9, wherein a given level of gradation is displayed by timewise changing each of the plurality of pieces of emission pattern information, for one pixel (i.e. the dithering circuit 19 changes the subfield for the frame of display in timewise progression) (see Fig. 1, Col. 5, Lines 5-29).

As to claims 4 and 12, see discussion of claims 2 and 3 above, claims 4 and 12 are rejected for the same reason as claims 3 and 11 in view of claim 2 and 10.

As to claims 5 and 13, Kasahara teaches a device and a method of displaying an image as claimed in claims 1 and 9, wherein a given level of gradation is displayed by spatially arranging each of the plurality of pieces of emission pattern information, for a plurality of adjacent pixels (i.e. the level of gradation is determined by the interaction of the given pixel and its neighboring pixels) (see Fig. 4, Col. 10, Lines 20-50).

As to claims 6 and 14, see discussion of claims 2 and 5 above, claims 6 and 14 are rejected for the same reason as claims 5 and 13 in view of claim 2 and 10.

As to claims 7 and 15, Kasahara teaches a method of displaying an image as claimed in claims 3 and 11, wherein a given level of gradation is displayed by spatially arranging each of the plurality of pieces of emission pattern information, for a plurality of adjacent pixels (i.e. the level of gradation is achieved with nine subfield were the subfield are adjacent pixels spatially arranged) (see Fig. 3A-3G, Col. 10, Lines 38-50).

As to claims 8 and 16, see discussion of claims 2 and 7 above, claims 8 and 16 are rejected for the same reason as claims 7 and 15 in view of claim 2 and 10.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamura (US Pub: 2003/0011542) is cited to teach as similar Plasma display driving system.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Calvin Ma whose telephone number is (571)270-1713. The examiner can normally be reached on Monday - Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571)272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chanh Nguyen/
Supervisory Patent Examiner, Art
Unit 2629

Application/Control Number: 10/536,928
Art Unit: 2629

Page 7

Calvin Ma
March 26, 2008